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What is claimed is:

1.　An estimation system for harness processing, comprising:

a storage unit which is constituted by a memory medium or

memory elements, and which stores an estimation function for

5　calculating an estimation of a harness based on a designated

processing condition for processing the harness;

an input unit which receives input of information; and

a control circuit which calculates the estimation of the harness

based on the estimation function read out from said storage unit and

10　the processing condition designated from said input unit.

2.　The estimation system for harness processing according to

claim 1, comprising a communication unit which receives the

estimation function and stores the received estimation function in

said storage unit.

15　　3.　The estimation system for harness processing according to

claim 1, wherein said input unit comprises a communication unit

which receives the processing condition from an external terminal

and provides the received processing condition to said control circuit,

and sends an estimation result for the harness calculated by said

20　control circuit to said external terminal.

4.　The estimation system for harness processing according to

claim 3, wherein:

said external terminal to which the estimation result is sent is a

specific terminal; and

25　　said control circuit confirms that said external terminal is the

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specific terminal until at least before the estimation result is sent to said external terminal, and then sends the estimation result to said external terminal via said communication unit.

5.　The estimation system for harness processing according to

5 claim 1, wherein the estimation function for the harness is a function for calculating a unit component price of the harness based on the processing condition for the harness.

6.　The estimation system for harness processing according to claim 2, wherein the estimation function for the harness is a function

10 for calculating a unit component price of the harness based on the processing condition for the harness.

7.　The estimation system for harness processing according to claim 3, wherein the estimation function for the harness is a function for calculating a unit component price of the harness based on the

15 processing condition for the harness.

8.　The estimation system for harness processing according to claim 4, wherein the estimation function for the harness is a function for calculating a unit component price of the harness based on the processing condition for the harness.

20　　9.　The estimation system for harness processing according to claim 1, comprising an output unit which outputs information,

wherein said control circuit performs:

a1) a step of acquiring the processing condition for the harness which is designated from said input unit;

25　　b1) a step of storing the designated processing condition in said

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storage unit,

c1) a step of reading out the designated processing condition from said storage unit,

d1) a step of reading out the estimation function from said

5   storage unit,

e1) a step of calculating the unit component price of the harness that corresponds to the designated processing condition, based on the read-out estimation function and a content of the designated processing condition,

10   f1) a step of storing the calculated unit component price in said storage unit,

g1) a step of reading out the unit component price from said storage unit, and

h1) a step of outputting the read-out unit component price via

15   said output unit.

10.   The estimation system for harness processing according to claim 1, wherein the estimation function stored in said storage unit is an operation time estimation function for calculating, based on the processing condition, an instrument operation time of each process

20   step for processing the harness by using a harness processing instrument.

11.   The estimation system for harness processing according to claim 10, wherein said control circuit performs:

a2) a step of acquiring the processing condition designated for

25   each process step via said input unit,

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b2) a step of storing the designated processing condition in said

storage unit,

c2) a step of reading out the designated processing condition

from said storage unit,

5　　d2) a step of reading out the operation time estimation function

from said storage unit,

e2) a step of calculating the instrument operation time of each

process step based on the read-out operation time estimation function

and the designated processing condition, and

10　　f2) a step of storing the calculated instrument operation time of

each process step in said storage unit.

12.　The estimation system for harness processing according to

claim 11, wherein:

said storage unit stores an operation cost estimation function for

15　calculating, based on the instrument operation time, an instrument

operation cost that is required for processing the harness using the

harness processing instrument; and

said control circuit performs

a3) a step of reading out the calculated instrument operation time

20　of each process step from said storage unit,

b3) a step of reading out the operation cost estimation function

from said storage unit,

c3) a step of calculating the instrument operation cost of each

process step based on the read-out instrument operation time of each

25　process step and the operation cost estimation function, and

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d3) a step of storing the calculated instrument operation cost of each process step in said storage unit.

13.　The estimation system for harness processing according to claim 12, wherein:

5　　said storage unit stores a work time estimation function for calculating an instrument work time which is required for processing the harness using the harness processing instrument, based on the designated processing condition; and

said control circuit performs

10　　a4) a step of reading out the work time estimation function from said storage unit,

b4) a step of calculating the instrument work time of each process step based on the read-out work time estimation function and the designated processing condition, and

15　　c4) a step of storing the calculated instrument work time of each process step in said storage unit.

14.　The estimation system for harness processing according to claim 13, wherein:

said storage unit stores a labor cost estimation function for

20　calculating, based on the instrument work time, an instrument labor cost that is required for processing the harness using the harness processing instrument; and

said control circuit performs

a5) a step of reading out the calculated instrument work time of

25　each process step from said storage unit,

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b5) a step of reading out the labor cost estimation function from said storage unit,

c5) a step of calculating the instrument labor cost of each process step based on the read-out instrument work time of each
5 process step and the labor cost estimation function, and

d5) a step of storing the calculated instrument labor cost of each process step in said storage unit.

15.   The estimation system for harness processing according to claim 14, wherein:

10   said storage unit stores a planning time estimation function for calculating, based on the designated processing condition, a planning time before processing the harness using the harness processing instrument; and

said control circuit performs

15   a6) a step of reading out the planning time estimation function from said storage unit,

b6) a step of calculating the planning time of each process step based on the read-out planning time estimation function and the designated processing condition, and

20   c6) a step of storing the calculated planning time of each processing step in said storage unit.

16.   The estimation system for harness processing according to claim 15, wherein:

said storage unit stores a planning cost estimation function for
25 calculating, based on the planning time, a planning cost required for

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processing the harness using the harness processing instrument; and

said control circuit performs

a7) a step of reading out the calculated planning time of each

process step from said storage unit,

5   b7) a step of reading out the planning cost estimation function

from said storage unit,

c7) a step of calculating the planning cost of each process step

based on the read-out planning time of each process step and the

planning cost estimation function, and

10   d7) a step of storing the calculated planning cost of each process

step in said storage unit.

17.   The estimation system for harness processing according to

claim 16, wherein said control circuit performs:

a8) a step of reading out the calculated instrument operation cost,

15   instrument labor cost, and planning cost of each process step from

said storage unit,

b8) a step of calculating a processing cost required for

processing the harness using the harness processing instrument, by

adding up the read-out instrument operation cost, instrument labor

20   cost, and planning cost, and

c8) a step of storing the calculated processing cost in said

storage unit.

18.   The estimation system for harness processing according to

claim 17, comprising an output unit which outputs information,

25   wherein said control circuit performs:

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a9) a step of reading out the calculated processing cost from said

storage unit,and

b9) a step of outputting the read-out processing cost via said

output unit.

5　　　　19.　The estimation system for harness processing according to

claim 18, wherein said control circuit performs:

a10) a step of reading out the calculated instrument operation

time, instrument work time, and planning time from said storage unit,

and

10　　　b10) a step of outputting the read-out instrument operation time,

instrument work time, and planning time via said output unit.

20.　An estimation system comprising: a storage unit which

stores information; an input unit which receives input of information;

and a control circuit which controls operations of said storage unit

15　and input unit,

wherein:

said storage unit stores a component database associating a

quantity of child components necessary for manufacturing each

harness and a unit child component price of the child components

20　with identification information of each harness, and also stores a

material cost estimation function for calculating a material cost of

each harness by inputting thereto, the quantity and the unit child

component price; and

said control circuit performs

25　　　a11) a step of acquiring identification information of a harness

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for which estimation is to be made via said input unit,

b11) a step of reading out the quantity and the unit child

component price associated with the acquired identification

information of the harness from the component database in said

5   storage unit,

c11) a step of reading out the material cost estimation function

from said storage unit,

d11) a step of calculating the material cost of the harness

corresponding to the acquired identification information, based on

10   the read-out material cost estimation function and the read-out

quantity of child components and unit child component price, and

e11) a step of storing the calculated material cost in said storage

unit.

21.   The estimation system according to claim 20, comprising

15   an output unit which outputs information,

wherein said control circuit performs

a12) a step of creating a component screen displaying the

read-out quantity of child components and unit child component

price, and outputting the created component screen via said output

20   unit,

b12) a step of acquiring a change of the quantity of child

components and/or unit child component price displayed on the

component screen, via said input unit, and

c12) a step of calculating the material cost of the harness based

25   on the changed quantity and unit child component price and the

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material cost estimation function.

22.　An estimation method for harness processing, wherein in a system comprising: a storage unit which is constituted by a memory medium or memory elements, and which stores an estimation

5　function for calculating an estimation of a harness based on a designated processing condition for processing the harness; a control circuit; and an input unit which receives input of information;

said estimation method causes said control circuit to calculate the estimation of the harness based on the estimation function read out

10　from said storage unit and the processing condition designated from said input unit.

23.　The estimation method for harness processing according to claim 22, wherein:

a communication unit is provided to said system; and

15　said estimation method causes said communication unit to receive the estimation function and store the received estimation function in said storage unit.

24.　The estimation method for harness processing according to claim 23, wherein:

20　a communication unit is provided to said input unit; and

said estimation method causes said communication unit to receive the processing condition from an external terminal, provide the received processing condition to said control circuit, and send an estimation result for the harness calculated by said control circuit to

25　said external terminal.

25. A program, wherein in a system comprising: a storage unit which is constituted by a memory medium or memory elements, and which stores an estimation function for calculating an estimation of a harness based on a designated processing condition for processing

5 the harness; and an input unit which receives input of information; and a control circuit, said program controls said control circuit to perform an operation of calculating the estimation of the harness based on the estimation function read out from said storage unit and the processing condition designated from said input unit.

10 26. The program according to claim 25, wherein said system comprises a communication unit which receives the estimation function and stores the received estimation function in said storage unit.

27. The program according to claim 25, wherein the input unit

15 comprises a communication unit which receives the processing condition from an external terminal, provides the received processing condition to said control circuit, and sends an estimation result for the harness calculated by said control circuit to said external terminal.

28. The program according to claim 27, wherein:

20 said external terminal to which the estimation result is sent is a specific terminal; and

said program controls said control circuit to confirm that said external terminal is the specific terminal until at least before the estimation result is sent to said external terminal, and then send the

25 estimation result to said external terminal via said communication

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unit.

29. The program according to claim 25, wherein the estimation

function for the harness is a function for calculating a unit component

price of the harness based on the processing condition for the

5 harness.

30. The program according to claim 26, wherein the estimation

function for the harness is a function for calculating a unit component

price of the harness based on the processing condition for the

harness.

10   31. The program according to claim 27, wherein the estimation

function for the harness is a function for calculating a unit component

price of the harness based on the processing condition for the

harness.

32. The program according to claim 28, wherein the estimation

15 function for the harness is a function for calculating a unit component

price of the harness based on the processing condition for the

harness.

33. The program according to claim 25, wherein:

said system comprises an output unit which outputs information;

20 and

said program controls said control circuit to perform

a1) a step of acquiring the processing condition for the harness

which is designated from said input unit,

b1) a step of storing the designated processing condition in said

25 storage unit,

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c1) a step of reading out the designated processing condition from said storage unit,

d1) a step of reading out the estimation function from said storage unit,

5   e1) a step of calculating the unit component price of the harness that corresponds to the designated processing condition, based on the read-out estimation function and a content of the designated processing condition,

f1) a step of storing the calculated unit component price in said

10   storage unit,

g1) a step of reading out the unit component price from said storage unit, and

h1) a step of outputting the read-out unit component price via said output unit.

15   34.   The program according to claim 25, wherein the estimation function stored in said storage unit is an operation time estimation function for calculating, based on the processing condition, an instrument operation time of each process step for processing the harness during which a harness processing instrument is operated.

20   35.   The program according to claim 34, controlling said control circuit to perform:

a2) a step of acquiring the processing condition designated for each process step via said input unit,

b2) a step of storing the designated processing condition in said

25   storage unit,

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c2) a step of reading out the designated processing condition from said storage unit,

d2) a step of reading out the operation time estimation function from said storage unit,

5   e2) a step of calculating the instrument operation time of each process step based on the read-out operation time estimation function and the designated processing condition,   and

f2) a step of storing the calculated instrument operation time of each process step in said storage unit.

10   36.   The program according to claim 35, wherein:

said storage unit stores an operation cost estimation function for calculating, based on the instrument operation time, an instrument operation cost that is required for processing the harness using the harness processing instrument; and

15   said program controls said control circuit to perform

a3) a step of reading out the calculated instrument operation time of each process step from said storage unit,

b3) a step of reading out the operation cost estimation function from said storage unit,

20   c3) a step of calculating the instrument operation cost of each process step based on the read-out instrument operation time of each process step and the operation cost estimation function, and

d3) a step of storing the calculated instrument operation cost of each process step in said storage unit.

25   37.   The program according to claim 36, wherein:

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said storage unit stores a work time estimation function for

calculating an instrument work time which is required for processing

the harness using the harness processing instrument, based on the

designated processing condition; and

5   said program controls said control circuit to perform

a4) a step of reading out the work time estimation function from

said storage unit,

b4) a step of calculating the instrument work time of each

process step based on the read-out work time estimation function and

10   the designated processing condition, and

c4) a step of storing the calculated instrument work time of each

process step in said storage unit.

38.   The program according to claim 37, wherein:

said storage unit stores a labor cost estimation function for

15   calculating, based on the instrument work time, an instrument labor

cost that is required for processing the harness using the harness

processing instrument; and

said program controls said control circuit to perform

a5) a step of reading out the calculated instrument work time of

20   each process step from said storage unit,

b5) a step of reading out the labor cost estimation function from

said storage unit,

c5) a step of calculating the instrument labor cost of each

process step based on the read-out instrument work time of each

25   process step and the labor cost estimation function, and

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d5) a step of storing the calculated instrument labor cost of each process step in said storage unit.

39.　The program according to claim 38, wherein:

said storage unit stores a planning time estimation function for

5　calculating, based on the designated processing condition, a planning time before processing the harness using the harness processing instrument; and

said program controls said control circuit to perform

a6) a step of reading out the planning time estimation function

10　from said storage unit,

b6) a step of calculating the planning time of each process step based on the read-out planning time estimation function and the designated processing condition, and

c6) a step of storing the calculated planning time of each

15　processing step in said storage unit.

40.　The program according to claim 39, wherein:

said storage unit stores a planning cost estimation function for calculating, based on the planning time, a planning cost required for processing the harness using the harness processing instrument; and

20　said program controls said control circuit to perform

a7) a step of reading out the calculated planning time of each process step from said storage unit,

b7) a step of reading out the planning cost estimation function from said storage unit,

25　c7) a step of calculating the planning cost of each process step

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based on the read-out planning time of each process step and the planning cost estimation function, and

d7) a step of storing the calculated planning cost of each process step in said storage unit.

5　　41.　The program according to claim 40, controlling said control circuit to perform:

a8) a step of reading out the calculated instrument operation cost, instrument labor cost, and planning cost of each process step from said storage unit;

10　　b8) a step of calculating a processing cost required for processing the harness using the harness processing instrument, by adding up the read-out instrument operation cost, instrument labor cost, and planning cost; and

c8) a step of storing the calculated processing cost in said

15　storage unit.

42.　The program according to claim 41, wherein:

said system comprises an output unit which outputs information; and

said program controls said control circuit to perform

20　　a9) a step of reading out the calculated processing cost from said storage unit, and

b9) a step of outputting the read-out processing cost via said output unit.

43.　The program according to claim 42, controlling said

25　control circuit to perform:

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a10) a step of reading out the calculated instrument operation

time, instrument work time, and planning time from said storage unit;

and

b10) a step of outputting the read-out instrument operation time,

5   instrument work time, and planning time via said output unit.